UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,422	02/05/2007	Hirokazu So	0074/071001	9486

7590 07/16/2010

Randolph A. Smith
Smith Patent Office
1901 Pennsylvania Ave., N.W.
Suite 901
Washington, DC 20006-3433

EXAMINER	
BERNARD, DANIEL J	

ART UNIT	PAPER NUMBER
2189	

MAIL DATE	DELIVERY MODE
07/16/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/576,422	SO ET AL.	
	Examiner	Art Unit	
	Daniel J. Bernard	2189	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1, 11, 12, and 14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 11, 12, and 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office action is responsive to Applicant's submission filed on 4 May 2010.

Status of the Claims

2. Claims 1, 11, 12, and 14 are pending. Claims 2-10, 13, and 15-20 have been canceled.

Response to Amendment

3. The objection to the claims has been withdrawn in view of Applicant's amendment.

Response to Arguments

4. Applicant's arguments with respect to the remaining claims have been fully considered, but they are not persuasive.

Applicant contends, on page 9 of the remarks, that the Komori reference does not disclose that "update information in the update notification part is updated only immediately before data of the nonvolatile recording area is first updated after initialization processing of the recording medium conducted at a time when the recording medium is inserted into the data processing apparatus." The examiner further agrees with this point but notes that Komori was not relied upon particularly to disclose this claimed limitation. Applicant further contends, on pages 9-10 of the remarks, that Komori does not disclose "the step of determining whether or not data of the nonvolatile recording area in the recording medium has been updated after the data was recorded by determining whether or not update information of a field in the recording area read from the recording medium corresponds to

update information in the update notification part read from the recording medium." In response, the examiner respectfully submits that Komori would have reasonably suggested the claimed step in question for the following reasons: given that Komori had already presented the nonvolatile memory with data recording area as previously noted, and incorporating the reasons for rejection set forth in the previous action, it would not be unreasonable to infer that Komori's reading a rewrite count (update information) and comparing it to a reference value to determine whether or not data of the recording area had been updated would have suggested to one of ordinary skill in the art a process step of determining whether or not data of the nonvolatile recording area in the recording medium has been updated after the data was recorded by determining whether or not update information of a field in the recording area read from the recording medium corresponds to update information in the update notification part read from the recording medium.

Applicant further contends, on page 11 of the remarks, that the Yoshino reference does not disclose that "update information in the update notification part is updated only immediately before data of the nonvolatile recording area is first updated after initialization processing of the recording medium conducted at a time when the recording medium is inserted into the data processing apparatus." The examiner further agrees with this point but notes that Yoshino was not relied upon particularly to disclose this claimed limitation. Similarly, Applicant further contends, on the same page, that Yoshino also does not disclose

"the step of determining whether or not data of the nonvolatile recording area in the recording medium has been updated after the data was recorded by determining whether or not update information of a field in the recording area read from the recording medium corresponds to update information in the update notification part read from the recording medium." In response, the examiner respectfully submits that Yoshino, in combination with Komori, would have reasonably suggested the claimed step in question for the following reasons: given that Yoshino directly compares equivalent update information fields of corresponding content (data) records, and incorporating the reasons for rejection set forth herein and in the previous action, the teachings of Yoshino would thus cover any shortfall in the teachings of Komori, taken in combination as a whole, to suggest the step of determining whether or not data of the nonvolatile recording area in the recording medium has been updated after the data was recorded by determining whether or not update information of a field in the recording area read from the recording medium corresponds to update information in the update notification part read from the recording medium.

Applicant further contends, on pages 12-13 of the remarks, that the Shibazaki reference does not disclose "the step of determining whether or not data of the nonvolatile recording area in the recording medium has been updated after the data was recorded by determining whether or not update information of a field in the recording area read from the recording medium corresponds to update information in the update notification part read

from the recording medium" or "the steps of making possible for update information in the update notification part in the nonvolatile recording area to be read from the data processing apparatus and impossible for update information to be written by the data processing apparatus; updating the update information by the controller at the time of writing or erasing of data to the nonvolatile recording area; and determining whether or not data of the nonvolatile recording area in the recording medium has been updated after the data was recorded by determining whether or not update information of a field in the recording area read from the recording medium corresponds to update information in the update notification part read from the recording medium." The examiner further agrees with these points but notes that Shibazaki was not relied upon particularly to disclose these claimed limitations. Similarly, Applicant further contends, on page 12 of the remarks, that the Shibazaki reference does not disclose that "update information in the update notification part is updated only immediately before data of the nonvolatile recording area is first updated after initialization processing of the recording medium conducted at a time when the recording medium is inserted into the data processing apparatus." In response, the examiner respectfully submits that Shibazaki, in combination with the foregoing references, would have reasonably suggested the claimed limitation in question for the following reasons: incorporating the reasons for rejection set forth in the previous action, Shibazaki is relied upon to demonstrate the initialization processing conducted upon insertion of the medium,

which further suggests that the update information would necessarily be updated before the data of the recording area were updated thereafter. Further, where Applicant contends, on page 14 of the remarks, that Shibazaki only discloses a volatile memory, it is noted that because the foregoing references have taught the claimed nonvolatile memory, and because it is known that nonvolatile memory could be implemented with similar functionality as in Shibazaki, it would thus not be unreasonable to treat the combination of Komori, Yoshida, and Shibazaki, taken as a whole, to suggest the limitations in question.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US Pat. No. 6,046,937, hereinafter Komori) in view of Yoshino et al. (US Pub. No. 2002/0083282, hereinafter Yoshino) and Shibazaki et al. (US Pub. No. 2001/0014933, hereinafter Shibazaki).

Regarding Claim 1, Komori teaches a recording medium comprising a nonvolatile recording area for storing data (col. 4, lines 41-66), an update notification part for updating update information of the time of writing or erasing of data to the nonvolatile recording area and holding the update information in the nonvolatile recording area, a host interface part for communicating with a data processing apparatus (col. 4, lines 16-30 and 41-66), a controller for reading and writing data from and to the nonvolatile recording area and supplying the data in the nonvolatile recording area and the update information to the data

processing apparatus via the host interface part, wherein update information in the update notification part can be read from the data processing apparatus and cannot be written by the data processing apparatus (from col. 4, line 63 to col. 5, line 3; col. 7, lines 28-38 and 46-53; Fig. 1, item 16). It is noted that Komori may not specifically teach, but Yoshino suggests, that the update information in said update notification part is updated only immediately before data of said recording area is first updated after initialization processing of the recording medium (¶ [0283] lines 1-10; ¶ [0284] lines 1-7: the update notification, as previously taught by Komori, in such a manner as to take place after initialization of the medium and before recording, thereby takes place immediately before the first update). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Komori and Yoshino, because, as Yoshino further suggests (¶ [290]), such an arrangement could make more efficient use of recording media. It is noted that Komori and Yoshino may not explicitly disclose, but Shibazaki suggests, that the update information in said update notification part is updated only immediately before data of the nonvolatile recording area is first updated after initialization processing of said recording medium is conducted at a time when the recording medium is inserted into the data processing apparatus (¶ [0062]: inserting a recording medium into a slot on a data processing apparatus and accessing the recording medium; ¶ [0064] and ¶ [0065]: read and write; ¶¶ [0071]-[0076]: initialization processing of inserted medium).

Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Komori, Yoshino, and Shibazaki, so as to take advantage of the flexibility of removable nonvolatile memory storage, as is commonly known in the art in the case of such processing that is to occur on a recording medium without autonomous processing capability and a power supply built in, then the recording medium would necessarily be interfaced with a data processing apparatus, such as by insertion into a slot on the apparatus.

Regarding Claim 11, Komori teaches that the nonvolatile recording area includes a data storage area which stores one or more pieces of data (col. 3, lines 25-44; col. 4, line 61 through col. 5, line 3). It is noted that Komori does not specifically teach a search information storage area which stores search information required when the data processing apparatus takes out each data stored in the data storage area, and at least one of the data storage areas has a field for storing update information in the update notification part. However, Yoshino suggests a search information storage area which stores search information required when the data processing apparatus takes out each data stored in the data storage area, and at least one of the data storage areas has a field for storing update information in the update notification part (¶ [0030] lines 1-12; ¶ [0264] lines 1-10; ¶ [0265] lines 1-11). Hence, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to combine the teachings of Komori and Yoshino, so as to optimize the management of relevant information associated with data for processing.

Regarding Claim 12, Komori teaches that the nonvolatile recording area includes a data storage area which stores one or more pieces of data (col. 3, lines 25-44; col. 4, line 61 through col. 5, line 3). It is noted that Komori does not specifically teach search information storage area which stores search information required when the data processing apparatus takes out each data stored in the data storage area, and the search information storage area has the field for storing update information in the update notification part immediately after the data is updated. However, Yoshino suggests search information storage area which stores search information required when the data processing apparatus takes out each data stored in the data storage area, and the search information storage area has the field for storing update information in the update notification part immediately after the data is updated (¶ [0030] lines 1-12; ¶ [0264] lines 1-10; ¶ [0265] lines 1-11). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Komori and Yoshino, so as to optimize the management of relevant information associated with data for processing.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komori et al. (US Pat. No. 6,046,937, hereinafter Komori) in view of Shibazaki et al. (US Pub. No. 2001/0014933, hereinafter Shibazaki) and Yoshino.

Regarding Claim 14, Komori teaches a data processing method, wherein a recording medium includes: a nonvolatile recording area for storing data (col. 4, 41-66), an update notification part for holding update information of data in the nonvolatile recording area (col. 4, lines 16-30 and 41-66), and a controller for reading and writing data from and to the recording area and supplying the data in the nonvolatile recording area and the update information to a data processing apparatus (col. 4, lines 16-30 and 41-66; col. 7, lines 14-38 and 46-53), and the data processing apparatus includes a data processor for reading data of the recording medium and temporarily storing the data and performing a data processing on the basis of update information read from the recording medium in the update notification part, comprising the steps of making possible for update information in the update notification part in the nonvolatile recording area to be read from the data processing apparatus and impossible for update information to be written by the data processing apparatus, and updating the update information by the controller at the time of writing or erasing of data to the nonvolatile recording area (col. 4, lines 16-30 and 41-66; col. 4, line 63 through col. 5, line 3; col. 7, lines 14-38 and 46-53), and determining whether or not data of the nonvolatile recording area in the recording medium has been updated by reading update

information in the update notification part of the recording medium (col. 7, lines 14-38 and 46-53; col. 8, lines 12-45). It is noted that Komori does not specifically teach a slot to which the recording medium is attached. However, Shibazaki suggests a slot to which a recording medium is attached (¶ [0062] lines 1-9). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Komori and Shibazaki, so as to take advantage of the flexibility of removable nonvolatile memory storage. It is noted that Komori and Shibazaki may not specifically disclose, but Yoshino suggests, determining whether or not data of said recording area in the recording medium has been updated after said data was recorded by determining whether or not update information of field in the recording area read from said recording medium corresponds to update information in said update notification part read from said recording medium (¶ [0245]; ¶ [0474] lines 1-9; ¶ [0475] lines 1-6). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Komori, Shibazaki, and Yoshino, because, as Yoshino further suggests (¶ [0244]; ¶ [0260]), such arrangements could provide for more reliable use of recording media.

Conclusion

Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Bernard, whose telephone number is 571-270-7840. The examiner can normally be reached on Monday through Thursday, 9:00 AM - 7:00 PM, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Reginald G. Bragdon can be reached on 571-272-4204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. J. B./
Examiner, Art Unit 2189

/Reginald G. Bragdon/
Supervisory Patent Examiner, Art Unit 2189